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H2
H2
- b) a reinforcing agent; and
 - c) a high molecular weight polymer.--

REMARKS

This is in response to the Office Action mailed February 23, 2000. If any fees are occasioned by the filing of this paper, please charge the same to Deposit Account No. 02-2135.

Claims 1 and 14 have been amended to recite that the polymer is a solid at room temperature. Support for that limitation is throughout the specification, for example at page 3, lines 18-20.

35 U.S.C. §112, first paragraph

Reconsideration and withdrawal of the rejection of claims 1, 6-14 and 19-28 under 35 U.S.C. § 112, first paragraph, are respectfully requested. The Action alleges that since only examples showing terpolymers containing 5-ethylidene-2-norbornene are operable in the invention, the claims should be so limited. Applicant respectfully traverses.

First, it is respectfully submitted that the rejection is based on an incorrect premise. Nowhere in the specification is it stated or suggested that polymers

lacking a 5-ethylidene-2-norbornene component would be inoperable. To the contrary, the invention is uniformly defined as including polymers in which that component is either present or absent, or which includes other non-conjugated dienes entirely. While terpolymers including a 5-ethylidene-2-norbornene component may represent a preferred embodiment, and such are in fact are disclosed in the Examples, it certainly does not follow that all other polymers are inoperative. The Action's assumption of inoperability is without factual basis, and cannot support the present rejection.

It has never been the law that claims must necessarily be limited to specific embodiments found in the Examples. In reversing a similar rejection, the CCPA in *In re Goffe*, 191 USPQ, 429, 431 (CCPA 1976) noted:

For all practical purposes, the board would limit appellant to claims involving the specific materials disclosed in the examples, so that a competitor seeking to avoid infringing a claim would merely have to follow the disclosure in the subsequently-issued patent to find a substitute. However, to provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts.

There is no adequate basis for the rejection, and it should be withdrawn.

35 U.S.C. §112, second paragraph

Reconsideration and withdrawal of the rejection of claims 1-28 under 35 U.S.C. §112, second paragraph, are respectfully requested. Specifically, the Examiner alleges that the presence of the term "optionally" renders the claims indefinite. Applicant respectfully traverses. It is respectfully submitted that the scope of all claims is quite clear and definite--the polyene component is either absent, or present in the specified amounts. Such claims are not unusual, and have been approved by the Board. For example, in reversing a similar rejection in *Ex parte Wu*, 10 USPQ2d 2031, 2032 (Bd. of Pat. App. and Int. 1989), the Board stated:

The rejection under 35 USC 112 is based on the Examiner's contention that the term "optionally" in claim 1 does not clearly indicate whether the polyamine is intended to be part of the composition. We have no difficulty determining the scope of claim 1 as drafted. The composition set forth in the claim can consist of the first three components or it can include a polyamine as a fourth component. We therefore do not consider the claims to be indefinite as a result of the claimed optional component.

See also *Ex parte Cordova*, 10 USPQ2d 1949, 1950 (Bd. of Pat. App. and Int. 1988):

The recitation "optionally" denotes that the unsaturated aliphatic carboxylic acid may or may not be employed. It is not apparent, and the examiner has not explained, why the use of such alternative language fails to particularly point out and distinctly claim the subject matter appellants regard as their invention. It is our opinion that the use of the alternative expression "optionally" in the rejected claims does not obfuscate the subject matter appellants regard a their invention.

As the Action cites no legal or factual support for the rejection, it should be withdrawn.

35 U.S.C. §102

Reconsideration and withdrawal of the rejection of claims 1-4 and 8-10 under 35 U.S.C. §102(e) as being anticipated by Gros and Allen¹ are respectfully requested.

Gros discloses blends of high and low molecular weight materials which are said to have increased hot and cold processability. Notably, Gros does not disclose any low molecular weight polymer having the relative amounts of monomer components recited in claim 1. The disclosure of molar ratios at column 3, lines 22-36 appears to be

¹Since the Allen reference is a European Patent, it is clear that 102(e) is not a proper ground for rejection. Applicant will assume that 102(b) was intended.

directed to the final low/high molecular weight blend. Moreover, Examples 3 and 4 of Gros appear to be directed to the low molecular weight materials, but in each instance, the polymer contained much less ethylene than presently claimed (59 mole% in Example 3; 66 mole% in Example 4). Thus, Gros cannot anticipate claim 1, or any claim dependent therefrom. Moreover, Gros does not mention the needle penetration test of claim 9, and in view of the foregoing, it cannot be assumed that the Gros low molecular weight material would inherently meet claim 9.

Allen discloses that high molecular weight ethylene-propylene copolymers can be blended with low molecular weight materials, and the resulting blends exhibit improved properties compared to high molecular weight materials blended with extender oils. Notably, Allen discloses that all of its low molecular weight materials are liquid at ambient temperature (page 2, lines 55-56). In contrast, claim 1 now recites that the claimed polymer is solid at room temperature. The Allen material does not meet that limitation, and there is no anticipation of claim 1, or any claim dependent therefrom. Moreover, Allen does not mention the needle penetration test of claim 9, and in view of the fact that Allen's low molecular weight materials are

liquids, it appears clear that the Allen material would not satisfy claim 9.

35 U.S.C. §103

Reconsideration and withdrawal of the rejection of claims 4-13 under 35 U.S.C. §103(a) as being unpatentable over Frances in view of Gros and Allen are respectfully requested.

First, Applicant respectfully submits that the rejection is confusing and internally inconsistent. For example, the rejection advances the alleged obviousness of combining aramid fibers with low molecular weight terpolymers, yet only claims 11-12 recite aramid fibers. The remaining claims subject to this rejection do not recite such fibers, and indeed claims 4-9 do not even require the presence of a reinforcing agent.

Moreover, in the second paragraph of the rejection, the Action makes reference to terpolymers recited in claims 2-5. As claims 2-3 are not part of the rejection as stated, the relevance of the Action's reliance on those claims is not understood.

Without waiving the foregoing, applicant will attempt to respond to this rejection in order to advance matters. If, however, the Examiner maintains this rejection,

clarification in a non-final Action, is respectfully requested.

Frances is directed to the production of particulate elastomeric compositions which may be used to incorporate aramid pulp into elastomers. The aramid pulp is first mixed with a reinforcing filler, to which is added a solution of elastomer in an organic solvent. That mixture is preferably dried to remove the solvent, leaving an elastomeric composition which may be used as is, or for blending the aramid pulp into the same or a different elastomer (column 1, line 44-column 2, line 5). In all Examples, the aramid pulp was premixed with a solution of some sort of rubber (natural, Neoprene or SBR) in toluene.

The Action admits that Frances does not disclose the presently claimed low molecular weight materials, and relies on Gros and Allen to fill in that gap. However, since neither Gros nor Allen discloses the claimed polymers (see above), they cannot fill in that gap in Frances and no *prima facie* case is made out.

It is clear that no *prima facie* case is made out by the suggested combination. In all instances, Frances preblended aramid fibers with a high molecular weight material dissolved in an organic solvent. There is no indication in Frances that preblending with a low molecular

weight material would be desirable or successful. Further, as neither Gros nor Allen is directed to aramid fibers at all, those references cannot supply the missing motivation. That motivation is supplied only by applicant's specification, which of course is not prior art.

Reconsideration and withdrawal of the rejection of claims 14-28 under 35 U.S.C. §103(a) as being unpatentable over Bushway in view of Frances taken with Gros and Allen are respectfully requested. Bushway teaches that prior methods of preblending aramid fibers with a solution of an elastomer in an organic solvent are "undesirable because such solvents are volatile and difficult to control and, therefore, present a health hazard" (col. 2, lines 35-38).

The Action admits that Bushway does not disclose the presently claimed low molecular weight materials, and relies on Gros and Allen to fill in that gap. However, since neither Gros nor Allen discloses the claimed polymers (see the discussion of the 102 rejection above), they cannot fill in that gap and no *prima facie* case is made out.

Moreover, it is readily apparent that Bushway directly criticizes the Frances method of preblending fibers with a solution of an elastomer in an organic solvent. Thus, one of ordinary skill would recognize that Bushway and Frances

are at odds, and would be steered away from making the combination advanced in the Action.

Reconsideration and withdrawal of the rejection of claim 28 under 35 U.S.C. §103(a) as being unpatentable over Bushway in view of Frances taken with Gros and Allen, and further in view of Oyama are respectfully requested. The deficiencies of the combination of Bushway, Frances, Gros and Allen have been discussed above, and applies equally well here. Oyama is relied upon as showing EPDM rubbers and aramid fibers made into belts, hoses and diaphragms. Oyama does not remedy the deficiencies noted above, and no *prima facie* case is made out.

Applicants submit that the present application is now in condition for allowance. Reconsideration and favorable action are earnestly requested.

Respectfully submitted,



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